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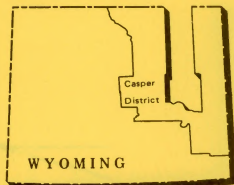
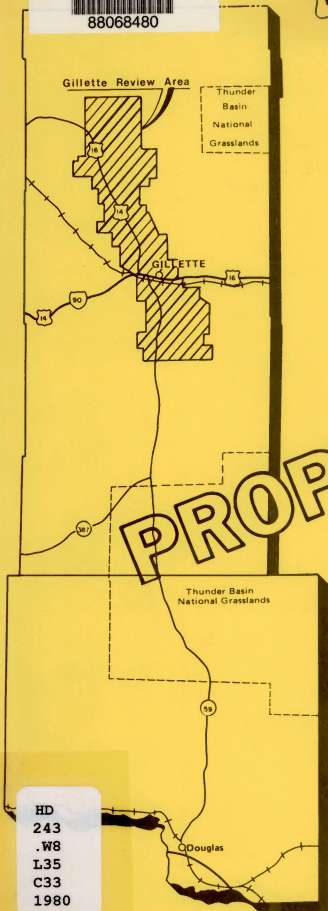


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# AMENDMENT TO WYOMING Land Use Decisions

## Eastern Powder River Basin Area

### Management Framework Plan



#### ROUTING

\_\_\_\_\_ SD  
 \_\_\_\_\_ ASD  
 \_\_\_\_\_ OPA  
 \_\_\_\_\_ 2 P&E *10/2*  
 \_\_\_\_\_ 161 RES  
 \_\_\_\_\_ TS  
 \_\_\_\_\_ MS  
 \_\_\_\_\_ 3 CF

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INTRODUCTION

The Casper District, Bureau of Land Management is reviewing and amending portions of the management framework plan (MFP) for the Eastern Powder River Basin, specifically those portions pertaining to federal coal resources. The planning amendment will be completed in June 1980.

Purpose

The reason for the review and amendment is to make certain the plan reflects current statutory requirements and policies, including the requirements of Section 522 of the Surface Mining Control and Reclamation Act of 1977.

Section 522 of the Act requires the Secretary of the Interior to conduct a federal lands review in order to identify lands unsuitable for surface coal mining. (Federal lands in this instance include private surface underlain by federal coal.)

Under the federal coal management program, adopted by the Secretary of the Interior in June 1979, leasing will be considered only for federal lands which have been found acceptable for coal mining after application of specific unsuitability criteria. The purpose of unsuitability criteria is to point out areas with key features or environmental problems that would make them unsuitable for certain types of coal mining and, therefore, unsuitable for coal leasing.

The Secretary also announced target dates of mid-1982 for new competitive leasing in the Powder River Basin and December 1984 for processing all outstanding preference right lease applications (PRLAs). Preference rights to coal were established under the old coal leasing regulations.

Based on these instructions, specific objectives for the current planning amendment are:

1. To identify lands which are acceptable for further consideration for coal leasing.
2. To process coal preference right lease applications. The lease applications are evaluated for compatibility with land use plans and for suitability for coal mining. During this current amendment process, 13 of the 60 PRLAs in the Casper District will be considered.
3. To identify coal land exchange opportunities. Exchanges for uncommitted federal coal can be made for existing leases or PRLAs in environmentally sensitive areas.

### Background

The MFP being amended was completed in 1977. It is a multiple use plan covering all BLM resource management programs in the Eastern Powder River Basin. The following considerations affecting coal development at that time are still applicable: coal leasing should not occur in environmentally sensitive areas; coal leasing should be postponed where mining would interfere with existing oil and gas production; and coal leasing should be planned to minimize adverse socioeconomic impacts.

An area of 19,200 acres, largely within the Thunder Basin National Grasslands of southeastern Campbell and northeastern Converse counties, was identified in 1977 for potential new leasing. The lands selected were "areas of least concern" with respect to environmental and socioeconomic impacts.

However, a September 1977 court decision, Natural Resources Defense Council v. Hughes, enjoined the Secretary of the Interior from identifying specific coal leasing tracts and further work on the 19,200-acre decision area was suspended.

The Department of the Interior subsequently undertook a review of coal leasing policies and procedures and prepared a new programmatic environmental statement on coal leasing alternatives. Included in the Department's proposed federal coal management program were draft criteria for determining what lands should be declared unsuitable for coal mining (unsuitability criteria).

The Casper District was asked to test the draft criteria on its 1977 plan. However, planning within the Thunder Basin National Grasslands was not adequate for such a test and an area adjacent to the grasslands, which contained some of the lands included in the 1977 decision, was selected for the test. It was named the Highlight review area. With adoption of the new federal coal management program in June 1979, the Highlight test was converted into a formal supplement to the 1977 Management Framework Plan.

The Highlight planning supplement will be included with the Gillette review area, currently under consideration, for coal activity planning (the next phase of the federal coal management program, as described in the section Summary of Unsuitability Criteria and Multiple Use Findings).

In the Highlight review area, 37,250 acres (approximately 5.7 billion tons of coal) were identified as acceptable for further consideration for coal leasing. With one exception, these areas are now the same. It has been confirmed by the U.S. Geological Survey that oil and gas is no longer being produced on 1,690 acres of the Highlight field. Within



Sections 20, 21, and 22, T. 45 N., R. 70 W., 1,385 acres are now acceptable for further consideration for coal leasing, and 305 acres are acceptable pending study because of the presence of possible alluvial valley floors. The fact that alluvial valley floors may exist does not eliminate these acres from further consideration for new coal leasing. Therefore, the total area available for further consideration within the Highlight review area is now 38,940 acres (6 billion tons).

The intent of the constraint on coal leasing in producing oil and gas fields is to maximize production of energy resources and not develop one resource to the detriment of another. The quantities of coal available for potential new leasing in the planning unit make it unnecessary to create new conflicts between coal and oil and gas production.

The constraint is applied in the following manner: producing oil and gas areas coincide with known geologic structures (KGS) as delineated by the U.S. Geological Survey. Such areas are deleted from planning unless it can be shown that economic recovery of the oil and gas resource will be completed prior to the commencement of potential coal mining operations. If such information is confirmed by the U.S. Geological Survey the constraint on coal planning will be lifted and the areas will be included in ongoing coal planning. However if estimates of the productive life of certain oil and gas wells are incorrect and oil and gas is still being produced on portions of a potential lease tract at the time of lease sale, those portions of the tract would be subject to a lease stipulation precluding mining until economic recovery of the oil and gas is complete.

The present planning amendment is based on a review of coal lands in the Gillette review area and a review of socioeconomic conditions in the Eastern Powder River Basin. The review process and findings are described on the following pages.

Since this brochure is a summary, some of the detailed supportive data including legal land descriptions have not been included. The illustrations included are reproductions and should not be used for detailed site-specific analyses or interpretations. Details information is available for public review at the Casper District Office of the Bureau of Land Management, 951 Union Boulevard, Casper, Wyoming 82601.

## GILLETTE REVIEW AREA

### Description

The Eastern Powder River Basin lies within the Powder River Coal Region. It includes Campbell County and that part of Converse County north of the North Platte River. Recent economic growth in the area is attributable to mineral development: uranium, oil and gas, and coal. A major consideration in land use planning is the ability of local communities to absorb growth associated with additional coal development. Another issue is the potential conflict between coal development and oil and gas production on the same sites.

The Gillette review area lies in a 4-to-10-mile-wide band along State Highway 59 and U.S. Highway 14/16, beginning about 15 miles south of Gillette and extending about 30 miles north of Gillette (see Map 1).

### Selection of Boundary

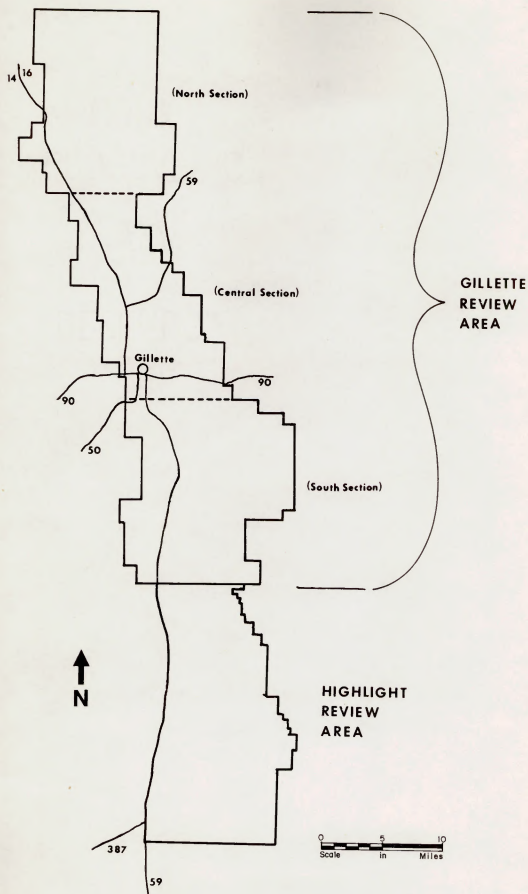
The boundary of the Gillette review area was established along legal subdivisions to include (1) coal in the Wyodak seam of high or moderate potential for development, and (2) the 13 existing preference right lease applications (PRLAs) being processed.

The southern boundary of the Gillette review area is the northern boundary of the Highlight review area; the eastern and western boundaries correspond roughly with the known limits of high and moderate potential coal; and the northern boundary coincides with the northernmost PRLA. The availability of information, manpower, and funds also influenced selection of the review area.

High and moderate potential coal has been designated by the U.S. Geological Survey on coal resource occurrence maps and is defined as follows: high potential coal has a stripping ratio of 0 to 4.5 cubic yards of overburden per ton of coal; moderate potential coal has a stripping ratio of 4.5 to 6.5 cubic yards of overburden per ton on coal.

Maps 2a, 2b, and 2c show the existing PRLAs and the high and moderate potential coal.

Map I  
Gillette Review Area  
Index Map

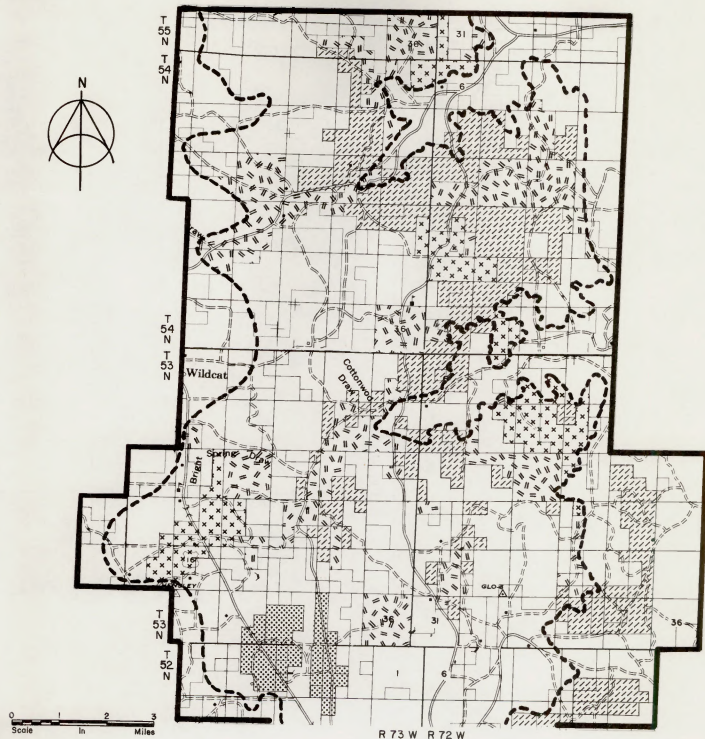


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BUREAU OF PLANT INDUSTRY  
WASHINGTON, D. C.

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Map 2a  
North Section Gillette Review Area  
Committed Coal, Producing Oil and Gas Fields, and  
Preference Right Lease Applications



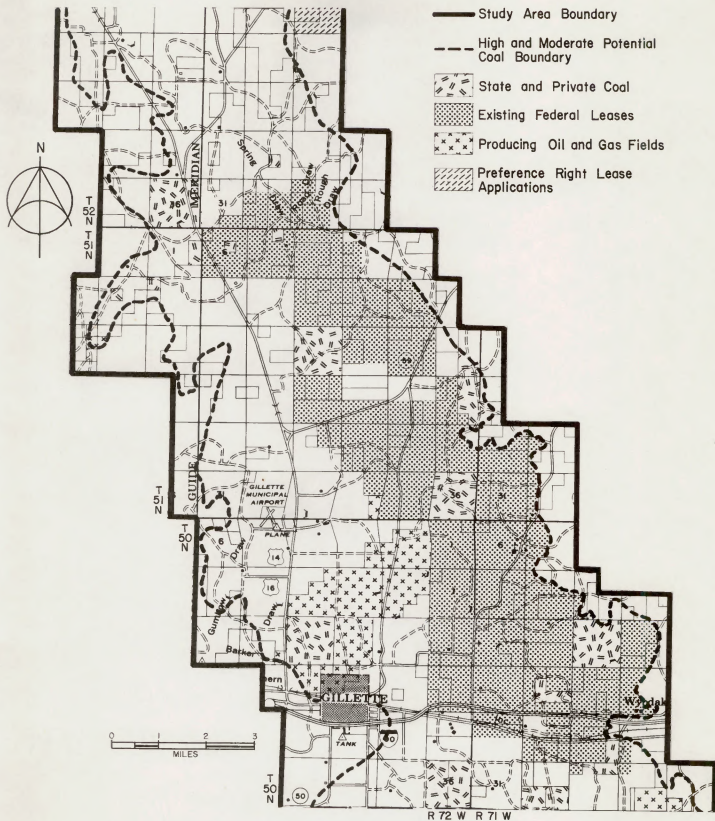
- Study Area Boundary
- - - High and Moderate Potential Coal Boundary
- State and Private Coal

- Existing Federal Leases
- Producing Oil and Gas Fields
- Preference Right Lease Applications



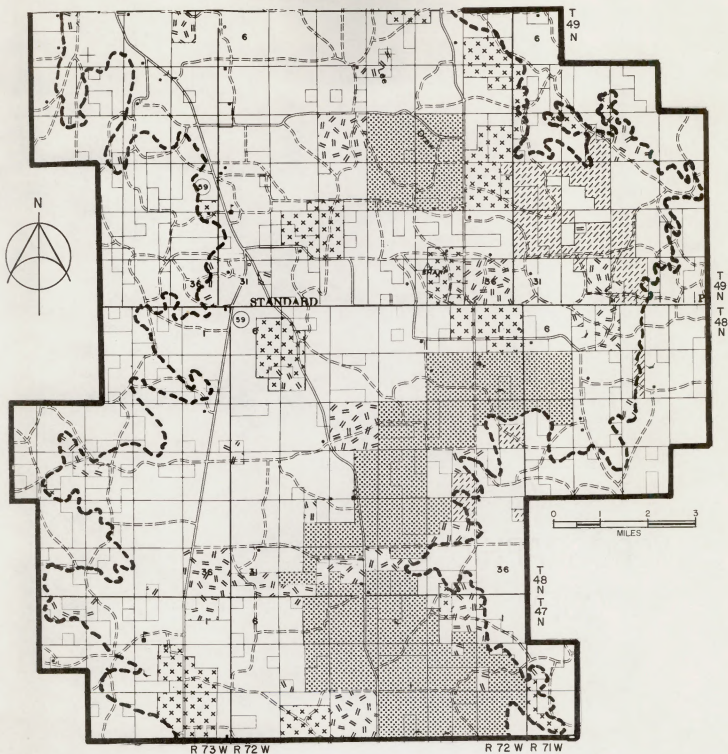


Map 2b  
Central Section Gillette Review Area  
Committed Coal, Producing Oil and Gas Fields, and  
Preference Right Lease Applications







Map 2c  
 South Section Gillette Review Area  
 Committed Coal, Producing Oil and Gas Fields, and  
 Preference Right Lease Applications





— Study Area Boundary

- - - High and Moderate Potential  
 Coal Boundary

 State and Private Coal

 Existing Federal Leases

 Producing Oil and Gas Fields

 Preference Right Lease  
 Applications

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## DESCRIPTION OF THE LANDS REVIEW PROCESS

An interdisciplinary team was formed to complete the review and amendment. Disciplines represented included archeology, geology, hydrology, realty, recreation, socioeconomics, soils, and wildlife.

The lands review within the Gillette review area was accomplished in four steps.

1. The current lands review deals only with uncommitted high and moderate potential federal coal, and PRLAs. Therefore, coal outside the high/moderate boundary was not considered, except within PRLAs. Also state and privately owned coal and existing federal coal leases were eliminated from consideration.
2. Producing oil and gas fields were dropped from consideration, except within PRLAs. The boundaries of the oil and gas fields coincide with known geologic structures identified by the U.S. Geological Survey in Casper.

Until the current planning amendment becomes final, the restriction on leasing in producing oil and gas fields can be adjusted on a case-by-case basis through the public participation process. Information that certain wells are no longer producing or needed for secondary recovery programs should be sent to BLM. If the findings are confirmed by the U.S. Geological Survey, the constraint can be removed and potential coal development considered. The U.S. Geological Survey is currently examining new information about several areas which was provided by the public.

3. Twenty unsuitability criteria were applied to the PRLAs and the federal coal remaining after steps 1 and 2. The criteria and results of their application are given in the following sections.
4. Finally, surface owners have been consulted, as required by Section 714(d) of the Surface Mining Control and Reclamation Act. Surface owners of record were asked to state their preference for or against the leasing of federal coal under their land. Coal lands can be dropped from further consideration if the private surface owners express opposition to leasing. (Surface owner consultation provisions do not apply to PRLAs.)

Results of the surface owner consultation are not yet available, but will be completed by the time the final amendment is published.

## SUMMARY OF UNSUITABILITY CRITERIA AND MULTIPLE USE FINDINGS

Of 292,000 acres in the Gillette review area, 66,400 were eliminated from consideration because they are part of existing federal coal leases or because the coal is privately or state-owned. An additional 74,300 acres\* were eliminated because they lie outside the area of high and moderate potential for coal development. Producing oil and gas fields occupy 14,100 acres\*; these are, at least temporarily, not available for consideration for coal development.

The unsuitability criteria were applied to the remaining 137,200 acres: as a result, 24,600 acres (3.1 billion tons) were determined unsuitable; 71,300 acres (13.5 billion tons) were determined acceptable pending study; and the remaining 41,300 acres (3.5 billion tons) were determined acceptable for further consideration for coal leasing (see Maps 3a, 3b, and 3c).

Areas determined acceptable pending study are lands where conflicts between coal mining and other resources may exist, but an unsuitability determination cannot be made until additional information is available. Options for areas designated acceptable pending study are to determine acceptability or unsuitability (1) before the final MFP amendment decision; (2) during activity planning, as described below; or (3) in the case of alluvial valley floors, immediately prior to lease issuance. (See Unsuitability Criteria and Results of Application, following.)

The results of surface owner consultation are incomplete.

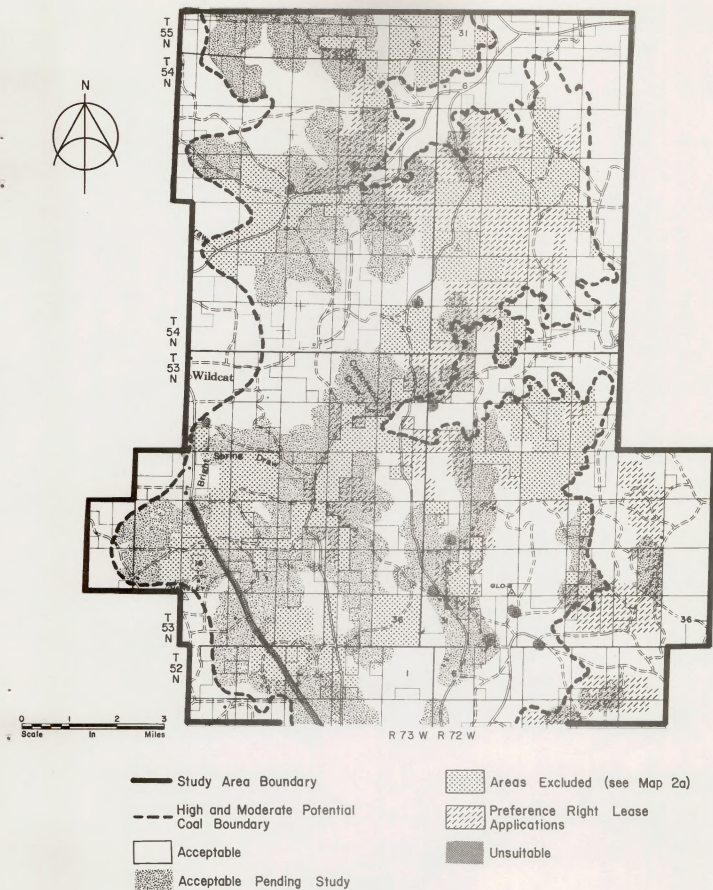
Upon completion of the planning amendment, coal activity planning will begin. Activity planning will involve the entire Powder River Basin (both Montana and Wyoming) and includes the following steps:

1. Potential lease tracts will be delineated from the acceptable areas identified in the planning amendments. The delineation will reflect industry expressions of interest, coal quality and quantity data, coal conservation, surface ownership, and preliminary leasing targets.
2. Tract profiles describing environmental and socioeconomic impacts of mining will be prepared.
3. Tracts will be ranked for leasing consideration according to criteria to be established by a regional coal team. Those tracts needed to meet leasing targets, along with alternatives, will be scheduled for sale. The regional coal team is composed of the governors of Wyoming and Montana, BLM state directors, and other state and federal representatives. They are responsible for recommending a final leasing target and schedule to the Secretary of the Interior, as well as for ranking and selecting tracts.

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\* Not including acreage lying within PRLAs.

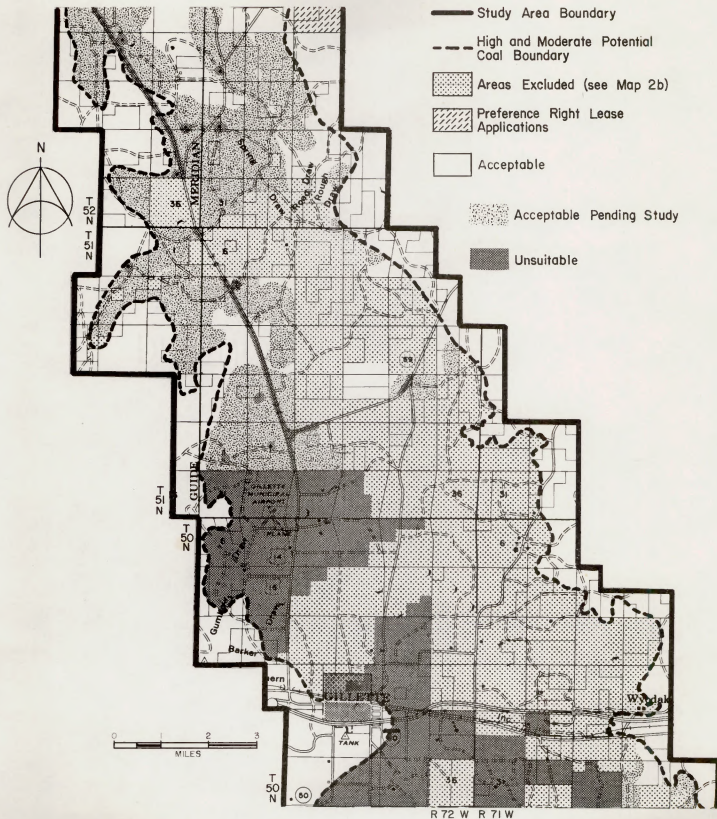
Map 3a  
North Section Gillette Review Area  
Areas Acceptable For Coal Leasing







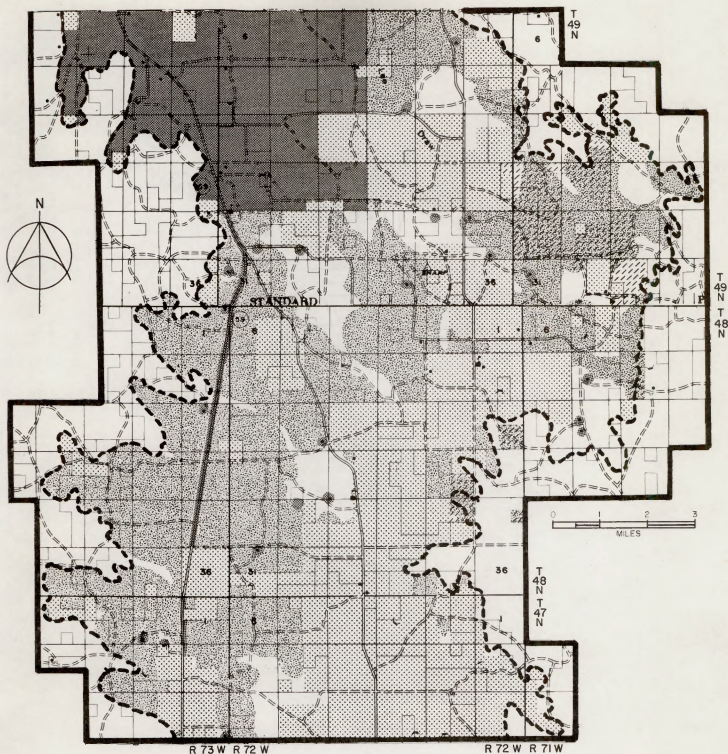
Map 3b  
Central Section Gillette Review Area  
Areas Acceptable For Coal Leasing







Map 3c  
South Section Gillette Review Area  
Areas Acceptable For Coal Leasing



— Study Area Boundary

--- High and Moderate Potential  
Coal Boundary

Acceptable Pending Study

Unsuitable

Areas Excluded (see Map 2c)

Preference Right Lease  
Applications

Acceptable



4. The cumulative impacts of leasing the tracts will be analyzed in a regional environmental impact statement (EIS), in this case, for the Powder River Basin in Wyoming and Montana. The EIS will analyze potential coal development in the Gillette and Highlight review areas, the Powder River Basin in Montana, and the Thunder Basin National Grasslands. Activity planning has already begun for the Highlight review area, and planning amendments are currently in progress for the Powder River Basin in Montana and the Grasslands, as well as for the Gillette review area.

The unsuitability criteria findings made a part of this planning amendment are not inflexible. New information acquired during activity planning, particularly during the preparation of tract profiles, can be incorporated in the tract selection process.





GILLETTE REVIEW AREA SUMMARY

	<u>ACRES</u>	<u>BILLIONS OF TONS*</u>
1. Total Gillette review area .....	292,000	
2. Preference right lease applica- tions (PRLAs) .....	17,000**	1.3
3. High and moderate potential coal not included in PRLAs .....	200,000	27.5
4. State and private coal .....	24,800	3.1
5. Existing federal leases .....	41,600	5.3
6. Producing oil and gas fields	14,100	.9
7. Uncommitted high and moderate potential federal coal .....	119,500	18.8
8. Unsuitability criteria application (line 2 plus line 7) .....	137,200**	20.1
9. Areas unsuitable .....	24,600	3.1
10. Areas acceptable pending study .....	71,300	13.5
11. Areas acceptable .....	41,300	3.5
12. Total available federal coal (line 10 plus line 11) .....	112,600	17.0

\* Tonnage is not directly related to acreage, because coal thickness varies. Tonnage was calculated by section (640 acres) on the basis of coal thickness maps (coal resource occurrence maps) provided by the U.S. Geological Survey.

\*\* Includes 4,300 acres of PRLA lying outside high and moderate potential coal.

#### SUMMARY OF SOCIOECONOMIC FINDINGS

In 1977 the multiple use decision was to confine new coal leasing to an area approximately half way between the communities of Douglas and Gillette, in the vicinity of the new community of Wright. This decision was based on both environmental and socioeconomic factors. At the time, it appeared that Douglas and Gillette needed additional time to accommodate added social and economic effects of coal development. This view was supported by public comment and BLM's Planning Area Analysis.

During this current plan amendment process, BLM and the Wyoming Department of Economic Planning and Development (DEPAD) are working together to determine whether the socioeconomic constraint is still valid. DEPAD has worked with the counties and communities which would be most affected by new coal development in the Gillette review area.

These areas of primary concern are Campbell County and the communities of Gillette and Wright, Converse County and Douglas, Crook County and Moorcroft, and Weston County and Newcastle.

An assessment of the baseline data collected by DEPAD indicates that the capacity of current services and facilities is adequate to absorb additional growth. The baseline data is available at the Casper District office and public review is invited. Lifting, or partial lifting, of the 1977 socioeconomic constraint would be based on the baseline data, as well as comments received as a result of the public review of this document.

Ultimately, the socioeconomic effects of any coal development resulting from this planning effort would be assessed in a regional environmental impact statement. Such an assessment would consider not only base line conditions, but also interrelated projects, such as new power plants or uranium mines, and specific coal development proposals.

## UNSUITABILITY CRITERIA AND RESULTS OF APPLICATION--GILLETTE REVIEW AREA

Unsuitability criteria, exceptions, and exemptions are part of 43 CFR 3400, Subpart 3461, of the final Federal Coal Management Regulations, published in the Federal Register on July 19, 1979.

### CRITERION #1--FEDERAL LAND SYSTEMS

All federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, National Forests, and federal lands in incorporated cities, towns, and villages. All federal lands which are recommended for inclusion in any of the above systems or categories by the administration in legislative proposals submitted to the Congress or which are required by statute to be studied for inclusion in such systems or categories shall be considered unsuitable.

*Exceptions.* (i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground coal mine, or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th meridian, that surface mining may be in compliance with the Multiple-Use Sustained-Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1976 and the Surface Mining Control and Reclamation Act of 1977.

(ii) A lease may be issued within the Custer National Forest with the consent of the Department of Agriculture as long as no surface coal mining operations are permitted.

*Exemptions.* The application of this criterion to lands within the listed land systems and categories is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977. The application of the portion of this criterion applying to land proposed for inclusion in the listed systems does not apply to lands: to which substantial legal and financial commitments were made prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

#### Data Sources

- BLM planning documents
- 1/2" = 1 mile surface management quads
- USGS topographic maps

#### Unsuitability Assessment

There are no federal land systems within the Gillette review area.

No areas were determined unsuitable for coal mining under this criterion.

## CRITERION #2--RIGHTS-OF-WAY AND EASEMENTS

Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes, or for agricultural crop production on federally owned surface shall be considered unsuitable.

*Exceptions.* A lease may be issued, and mining operations approved, in such areas if the surface management agency determines that:

(i) All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or

(ii) The right-of-way or easement was granted for mining purposes; or

(iii) The right-of-way or easement was issued for a purpose for which it is not being used; or

(iv) The parties involved in the right-of-way or easement agree, in writing, to leasing; or

(v) It is impractical to exclude such areas due to the location of coal and method of mining and such areas or uses can be protected through appropriate stipulations.

*Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

### Data Sources

--BLM master title plats

--BLM planning documents

--1/2" = 1 mile surface management quads

--land ownership map compiled for Campbell County by Snyder, a professional surveyor

### Unsuitability Assessment

Rights-of-way on federal surface are as follows (see Maps 4a, 4b, 4c): oil and gas pipelines, totaling 5.66 miles and 17.44 acres (right-of-way width of 25 feet); and power lines, totaling 3.01 miles and 5.47 acres (right-of-way width of 15 feet).



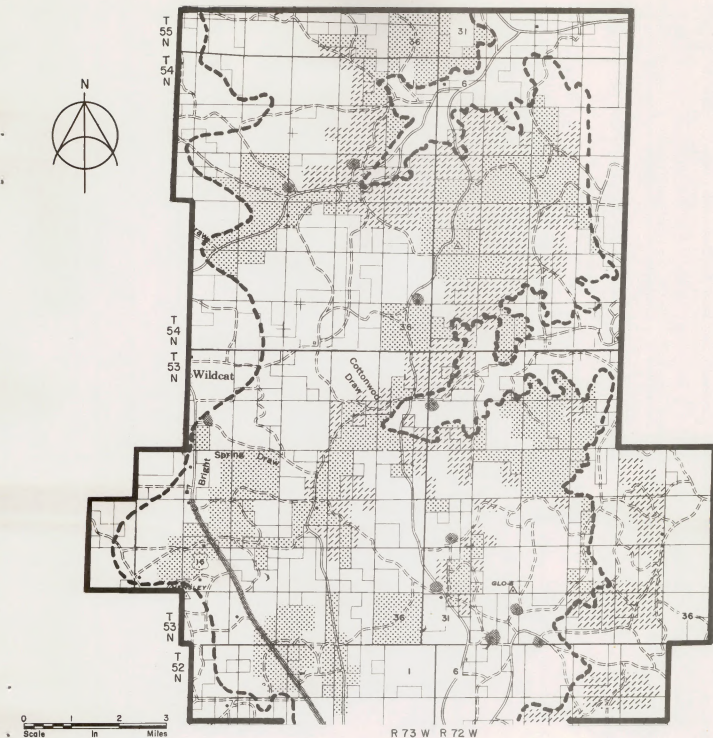
Rights-of-way for county roads across federal surface were not considered unsuitable, because county roads can be, and have been, re-located to accommodate coal mining.

Only .25 mile of state or federal highway crosses federal surface within the Gillette review area: a portion of State Highway 59, south of Gillette. The area of its right-of-way and buffer zone were counted as part of criterion #3.

Within the Gillette review area, the following areas were determined unsuitable under criterion #2:

	<u>ACRES</u>	<u>TONS</u>
Within area available for competitive leases or exchanges--high and moderate potential coal .....	2.0	300,000
Within PRLAs .....	21.0	2,600,000
TOTAL .....	23.0	2,900,000

Map 4a  
North Section Gillette Review Area  
Unsuitability Criterion 2 and 3  
Rights-of-Way and Buffer Zones

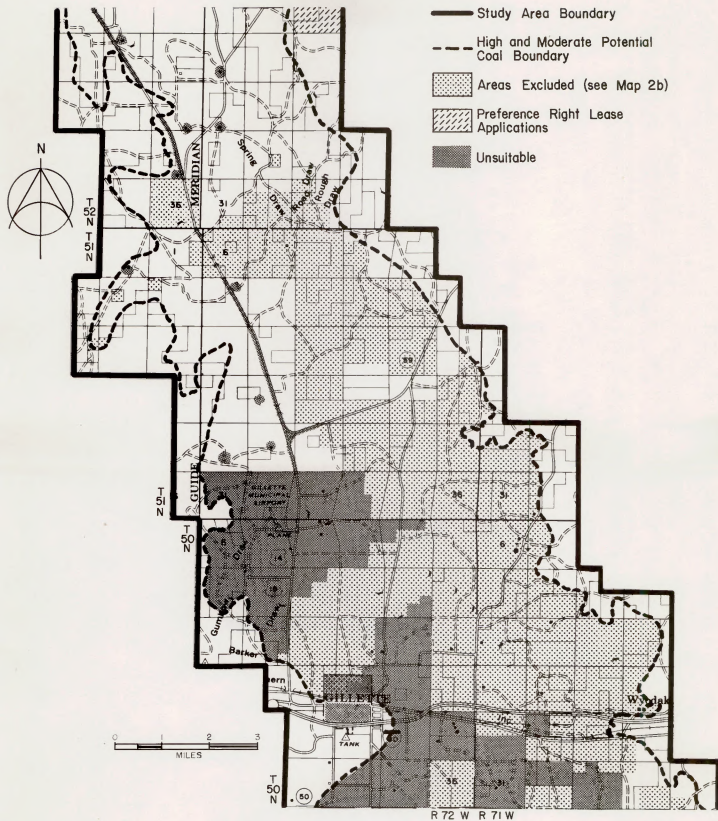


- Study Area Boundary
- High and Moderate Potential Coal Boundary
- Unsuitable

- Areas Excluded (see Map 2a)
- Preference Right Lease Applications



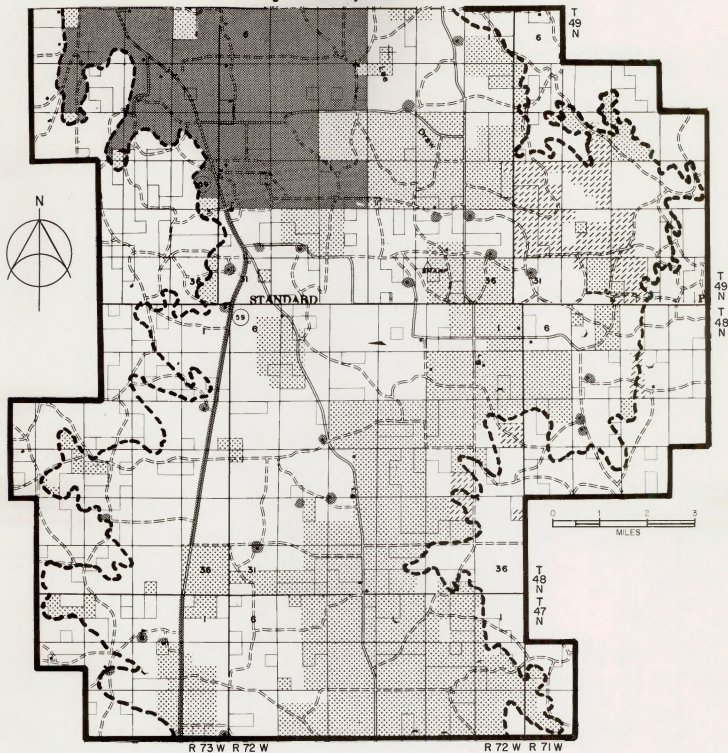
Map 4b  
 Central Section Gillette Review Area  
 Unsuitability Criterion 2 and 3  
 Rights-of-Way and Buffer Zones







Map 4c  
South Section Gillette Review Area  
Unsuitability Criterion 2 and 3  
Rights-of-Way and Buffer Zones



— Study Area Boundary

--- High and Moderate Potential  
Coal Boundary

■ Unsuitable

▤ Areas Excluded (see Map 2c)

▨ Preference Right Lease  
Applications



### CRITERION #3--BUFFER ZONES FOR RIGHTS-OF-WAY, COMMUNITIES, AND BUILDINGS

Federal lands affected by section 522(e)(4) and (5) of the Surface Mining Control and Reclamation Act of 1977 shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community or institutional building or public park or within 300 feet of an occupied dwelling.

Exceptions. A lease may be issued for land:

(i) Used as mine access roads or haulage roads that join the right-of-way for a public road;

(ii) For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated;

(iii) For which owners of occupied buildings have given written permission to mine within 300 feet of their buildings.

Exemptions. The application of this criterion is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

#### Data Sources

--BLM planning documents

--1/2" = 1 mile surface management quads

--USGS topographic maps

--land ownership map compiled for Campbell County by Snyder, a professional surveyor

--EMARS negative nominations for 3-mile buffer around future city limits of Gillette, reiterated 10/31/79 by Joe Racine, Director, City Department of Planning and Development in a letter to the State Department of Economic Planning and Development.

#### Unsuitability Assessment

The following require buffer zones: the city of Gillette, 22.32 miles of state or federal highway, and 47 dwellings (see Maps 4a, 4b, 4c).

Buffer zones for county roads were not considered unsuitable, because county roads can be, and have been, relocated to accommodate coal mining.

Acreage determined unsuitable because of the presence of a state or federal highway was based on the 100-foot buffer zone on each side of the highway plus the width of the right-of-way.

A buffer zone of 6 miles around the city of Gillette was established as requested by the city planner in Gillette: the city government prefers no coal leasing within 3 miles of the anticipated future city limits.

Within the Gillette review area, the following areas were determined unsuitable under criterion #3:

	ACRES	TONS
Within area available for competitive leases or exchanges		
--high and moderate potential coal .....	24,585.0	3,097,600,000
Within PRLAs .....	11.0	1,200,000
TOTAL .....	24,596.0	3,098,800,000

#### CRITERION #4--WILDERNESS STUDY AREAS

Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable, unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the Federal Land Policy and Management Act of 1976.

Exemptions. The application of this criterion to lands for which the Bureau of Land Management is the surface management agency and lands in designated wilderness areas in National Forests is subject to valid existing rights.

##### Data Sources

--BLM planning documents

##### Unsuitability Assessment

There are no wilderness study areas within the Gillette review area.

No areas were determined unsuitable for coal leasing under this criterion.



#### CRITERION #5--SCENIC AREAS

Scenic federal lands designated by visual resource management analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable. A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

#### Data Sources

--BLM planning documents

#### Unsuitability Assessment

There are no lands in the Gillette review area designated as visual resource management Class I.

No areas were determined unsuitable for coal mining under this criterion.

#### CRITERION #6--LAND USED FOR SCIENTIFIC STUDY

Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

#### Data Sources

--BLM planning documents

#### Unsuitability Assessment

There are no federal lands in the Gillette review area used for scientific study.

No areas were determined unsuitable for coal mining under this criterion.

## CRITERION #7--HISTORIC LANDS AND SITES

All districts, sites, buildings, structures, and objects of historic, architectural, archeological, or cultural significance on federal lands which are included in or eligible for inclusion in the National Register of Historic Places, and an appropriate buffer zone around the outside boundary of the designated property (to protect the inherent values of the property that make it eligible for listing in the National Register) as determined by the surface management agency, in consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Office shall be considered unsuitable.

*Exceptions.* All or certain stipulated methods of coal mining may be allowed if the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and State Historic Preservation Office that the direct and indirect effects of mining, as stipulated, on a property in or eligible for the National Register of Historic Places will not result in significant adverse impacts to the property.

*Exemptions.* The application of this criterion to a property listed in the National Register is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977. The application of the criterion to buffer zones and properties eligible for the National Register does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

### Data Sources

--National Register of Historic Places Annual Listing of Historic Properties Federal Register, February 6, 1979, Vol. 44. No. 26.

--BLM cultural resources data base (maps and written reports)

--BLM planning documents

### Unsuitability Assessment

No known prehistoric or historic sites or unleased federal coal in the Gillette review area are listed on or officially determined eligible for listing on the National Register of Historic Places.

No areas were determined unsuitable for coal mining under this criterion.

#### CRITERION #8--NATURAL AREAS

Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

Exceptions. A lease may be issued and mining operation approved in an area or site if the surface management agency determines that:

- (i) With the concurrence of the state, the area or site is of regional or local significance only;
- (ii) The use of appropriate stipulated mining technology will result in no significant adverse impact to the area or site; or
- (iii) The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g., paleontological sites).

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which includes operations on which a permit has been issued.

#### Data Sources

--BLM planning documents

--National Parks and Landmarks 1972

National Historic Landmarks 1976

(Publications of the Department of the Interior, National Park Service)

#### Unsuitability Assessment

There are no designated natural areas or National Natural Landmarks in the Gillette review area.

No areas were determined unsuitable for coal mining under this criterion.

# CRITERION #9--FEDERALLY LISTED ENDANGERED SPECIES HABITAT

Federally designated critical habitat for threatened or endangered plant and animal species, and habitat for federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

Exceptions. A lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

## Data Sources

- BLM planning documents
- Wyoming Game and Fish Department contract YA-512-CT8-126 with BLM, reports and maps 1979
- Wyoming Game and Fish Department wildlife distribution maps 1977
- Fish and Wildlife Service endangered species maps 1979
- BLM wildlife biologist field investigations 1979

## Unsuitability Assessment

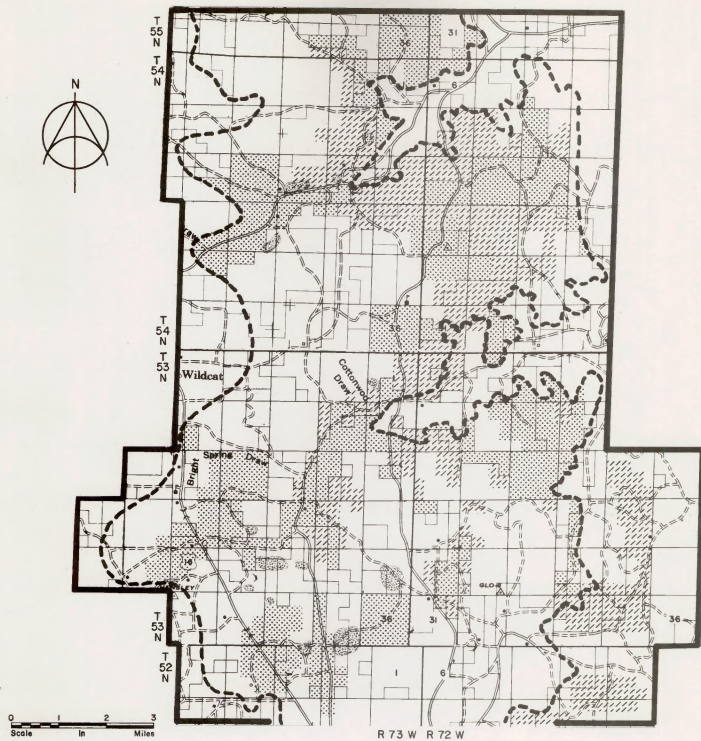
The black-footed ferret is the only federally listed threatened or endangered species which may occur in the review area and which is not treated in other criteria (see #11, #12, #13). Prairie dog towns are potential habitat for black-footed ferrets. There are 770 acres of prairie dog town lying over uncommitted federal coal which has not been excluded from leasing by other criteria. Coordination with the Fish and Wildlife Service is under way, and the plan is to survey the towns for the presence of ferrets by mid-May. Until the survey is completed, the towns are considered acceptable for coal mining pending study (see Maps 5a, 5b, and 5c).

Within the Gillette review area, the following areas were determined acceptable pending study:

	ACRES	TONS
Within area available for competitive leases or exchanges		
--high and moderate potential coal .....	715.0	94,200,000
Within PRLAs .....	55.0	5,800,000
TOTAL .....	770.0	100,000,000



Map 5a  
North Section Gillette Review Area  
Unsuitability Criterion 9  
Threatened and Endangered Species

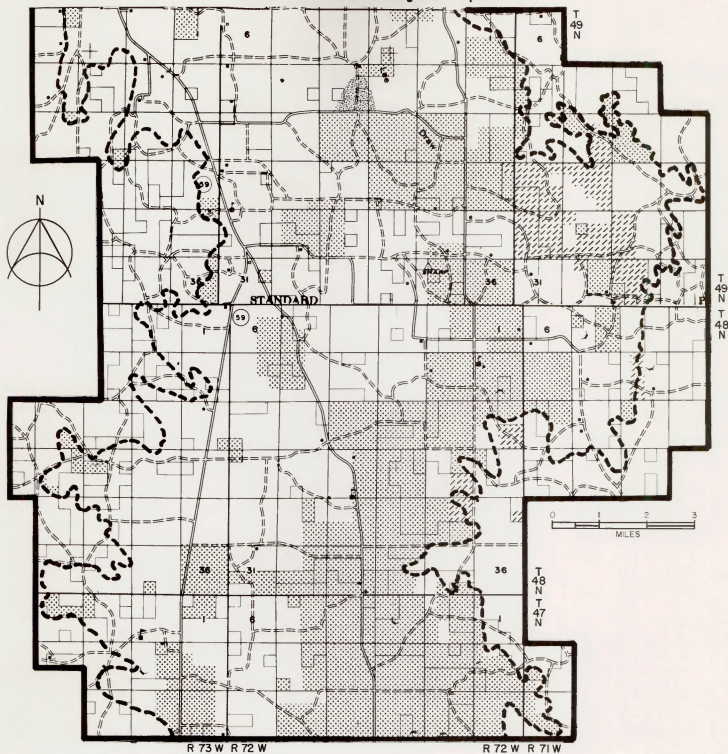


- Study Area Boundary
- High and Moderate Potential Coal Boundary
- Acceptable Pending Study

- Areas Excluded (see Map 2a)
- Preference Right Lease Applications



Map 5c  
South Section Gillette Review Area  
Unsuitability Criterion 9  
Threatened and Endangered Species



— Study Area Boundary

--- High and Moderate Potential  
Coal Boundary

Acceptable Pending Study

Areas Excluded (see Map 2c)

Preference Right Lease  
Applications



CRITERION #10--STATE LISTED ENDANGERED SPECIES HABITAT

Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

Exceptions. A lease may be issued and mining operations approved if, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Data Sources

None.

Unsuitability Assessment

No state endangered or threatened species law exists, so this criterion cannot be applied.

No areas were determined unsuitable for coal mining under this criterion.



#### CRITERION #11--BALD AND GOLDEN EAGLE NESTS

A bald or golden eagle nest or site on federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exceptions. A lease may be issued if:

(i) It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or

(ii) The surface management agency, with the concurrence of the Fish and Wildlife Service, determines that the golden eagle nest(s) will be moved.

(iii) Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

#### Data Sources

--BLM planning documents

--Wyoming Game and Fish Department contract WY-512-CT8-126 with BLM, reports and maps 1979

--BLM wildlife biologist field investigations 1979

--Fish and Wildlife Service, Sheridan Field Station information 1979

#### Unsuitability Assessment

There are no known bald eagle nests within the Gillette review area. However, there are three golden eagle nests on uncommitted federal coal. One of these nests is within an area assessed as unsuitable by application of another criterion. BLM and the Fish and Wildlife Service are in consultation and plan to determine appropriate buffer zones for the two remaining nests by mid-May. The criterion exceptions, as described above, will also be applied. Until this work is complete, it is not possible to determine the acreage or tonnage that will be affected by this criterion.

CRITERION #12--BALD AND GOLDEN EAGLE ROOSTS

Bald and golden eagle roost and concentration areas on federal lands used during migration and wintering shall be considered unsuitable.

*Exceptions. A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.*

Data Sources

--BLM planning documents

--Wyoming Game and Fish Department contract WY-512-CT8-126 with BLM, reports and maps 1979

--BLM wildlife biologist field investigations 1979

--Fish and Wildlife Service, Sheridan Field Station, information 1979

Unsuitability Assessment

No bald or golden eagle roosts or concentration areas are known to exist in the Gillette review area.

No areas were determined unsuitable for coal mining under this criterion.

#### CRITERION #13--FALCON CLIFF NESTING SITES

Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exceptions. A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the falcon habitat during the periods when such habitat is used by the falcons.

#### Data Sources

--BLM planning documents

--Wyoming Game and Fish Department contract YA-512-CT8-126 with BLM, reports and maps 1979

--BLM wildlife biologist field investigations 1979

--Fish and Wildlife Service, Sheridan Field Station, information 1979

#### Unsuitability Assessment

There are no known falcon (excluding kestrel) cliff nesting sites on federal lands in the Gillette review area.

No areas were determined unsuitable for coal mining under this criterion.

#### CRITERION #14--MIGRATORY BIRD HABITAT

Federal lands which are high priority habitat for migratory bird species of high federal interest on a regional or national basis, as determined jointly by the surface management agency and the Fish and Wildlife Service, shall be considered unsuitable.

Exceptions. A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

#### Data Sources

- BLM planning documents
- Wyoming Game and Fish Department contract YA-512-CT8-126 with BLM, reports and maps 1979
- Wyoming Game and Fish Department wildlife distribution maps 1977
- Fish and Wildlife Service endangered species maps 1979
- Fish and Wildlife Service, Sheridan Field Station, information 1979
- BLM wildlife biologist field investigations 1979

#### Unsuitability Assessment

Migratory birds of high federal interest which may occur in the Powder River Basin are as follows. The list was derived in consultation with the Fish and Wildlife Service.

Canvasback	Peregrine falcon
Double-crested cormorant	Prairie falcon
White pelican	Ferruginous hawk
Sandhill crane	Osprey
Whooping crane	Merlin
Mountain plover	Burrowing owl
Long-billed curlew	Lewis woodpecker
Bald eagle	Dicksissel
Golden eagle	

High priority habitat is an area containing one or more limited environmental factors needed to support a population of at least one of the listed species. All high priority habitat must meet the following criteria:

(1) It must be used regularly (though use can be confined to one season during the year) by one or more of the listed species.

(2) Its availability for uses such as feeding, reproduction, nesting, molting and/or wintering must be either (a) limited, or (b) supportive of concentrations, of a listed species in the indicated coal region.

(3) It must contain a combination of natural or man-made factors (e.g. riparian vegetation, reservoirs, cliff sites, tall building, etc.) that provide an essential quantity or quality of one or more of the habitat requirements of a listed species: food, water, cover, or space.

Potential high priority habitat for two species, the burrowing owl and ferruginous hawk, occurs in the Gillette review area. BLM is in consultation with the Fish and Wildlife Service for the purpose of delineating the habitat and possibly applying the exceptions to the criterion. This determination is scheduled for completion by mid-May. Until then, it is not possible to determine the acreage or tonnage that will be affected by this criterion.



## CRITERION #15--HABITAT FOR STATE HIGH-INTEREST WILDLIFE

Federal lands which the surface management agency and the state jointly agree are fish and wildlife habitat for resident species of high interest to the state and which are essential for maintaining these priority wildlife species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include:

- (i) Active dancing and strutting grounds for sage grouse, sharp-tailed grouse, and prairie chicken;
- (ii) Winter ranges most critical for deer, antelope, and elk; and
- (iii) Migration corridors for elk

*Exceptions.* A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

*Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

### Data Sources

--BLM planning documents

--Wyoming Game and Fish Department contract YA-512-CT8-126 with BLM, reports and maps 1979

--Wyoming Game and Fish Department wildlife distribution maps 1977

--Fish and Wildlife Service endangered species maps 1979

--Fish and Wildlife Service, Sheridan Field Station, information 1979

--BLM wildlife biologist field investigations 1979

### Unsuitability Assessment

The Wyoming Game and Fish Department has provided a list of 84 resident species of high interest to the State (see letter attached), and is in the process of delineating known habitats for those species that occur in the Gillette review area. In mid-April, BLM and Wyoming Game and Fish will meet and agree on essential habitat which should be considered unsuitable. Until then, no determination of acreage or tonnage affected by this criterion can be made.

#### CRITERION #16--FLOODPLAINS

Federal lands in riverine, coastal, and special floodplains (100-year recurrence interval) shall be considered unsuitable unless, after consultation with the U.S. Geological Survey, the surface management agency determines that all or certain stipulated methods of coal mining can be undertaken without substantial threat of loss to people or property, and to the natural and beneficial values of the floodplain on the lease tract and downstream.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

#### Data Sources

--HUD Flood Insurance Studies for Campbell County, obtained from Campbell County commissioners

--USGS topographic maps

--1/2" = 1 mile surface management quads

--BLM planning documents

#### Unsuitability Assessment

Total floodplain acreage is 4,962.48. BLM has determined that certain stipulated methods of coal mining can be undertaken without threatening people or property downstream or the natural and beneficial values of the floodplain. Therefore, these floodplains have been determined acceptable for further consideration for coal leasing.

BLM is in the process of coordinating these findings with the U.S. Geological Survey; the process will be completed prior to issuance of the final land use plan amendment.

No areas were determined unsuitable for coal mining under criterion #16.

#### CRITERION #17--MUNICIPAL WATERSHEDS

Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

Exceptions. A lease may be issued where:

(i) The surface management agency determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree; and

(ii) The municipality (incorporated entity) or the responsible governmental unit concurs in writing in the issuance of the lease.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

#### Data Sources

--BLM planning documents

#### Unsuitability Assessment

There are no committed municipal watersheds within the Gillette review area.

No areas were determined unsuitable for coal mining under this criterion.

#### CRITERION #18--NATIONAL RESOURCE WATERS

Federal lands with national resource waters, as identified by states in their water quality management plans, and a buffer zone of federal lands 1/4 mile from the outer edge of the far banks of the water, shall be unsuitable.

Exceptions. The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the national resource waters.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

#### Data Sources

--BLM planning documents

#### Unsuitability Assessment

There are no identified natural resource waters in the Gillette review area.

No areas were determined unsuitable for coal mining under this criterion.

## CRITERION #19--ALLUVIAL VALLEY FLOORS

Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in § 3400.0-5(a) of this title, the standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published, and approved state programs under the Surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

Exemptions. This criterion does not apply to surface coal mining operations which produced coal in commercial quantities in the year preceding August 3, 1977, or which had obtained a permit to conduct surface coal mining operations.

### Data Sources

- BLM planning documents
- USGS topographic maps
- Infrared aerial photos

### Unsuitability Assessment

Final alluvial valley floor (AVF) guidelines of the Office of Surface Mining have not been published. Therefore, BLM has used a method of identifying possible AVFs based on physical data (valley width, drainage area, current agricultural uses, etc.) that are available on existing maps and aerial photos. In addition, a 1/4 mile buffer was established along each possible AVF to provide the protection specified in the criterion. Both AVFs and their buffer zones have been placed in the category of acceptable pending study, and, in accordance with the Department of the Interior's coal management regulations, will be carried through activity planning and lease sale in this category (see Maps 6a, 6b, and 6c.).

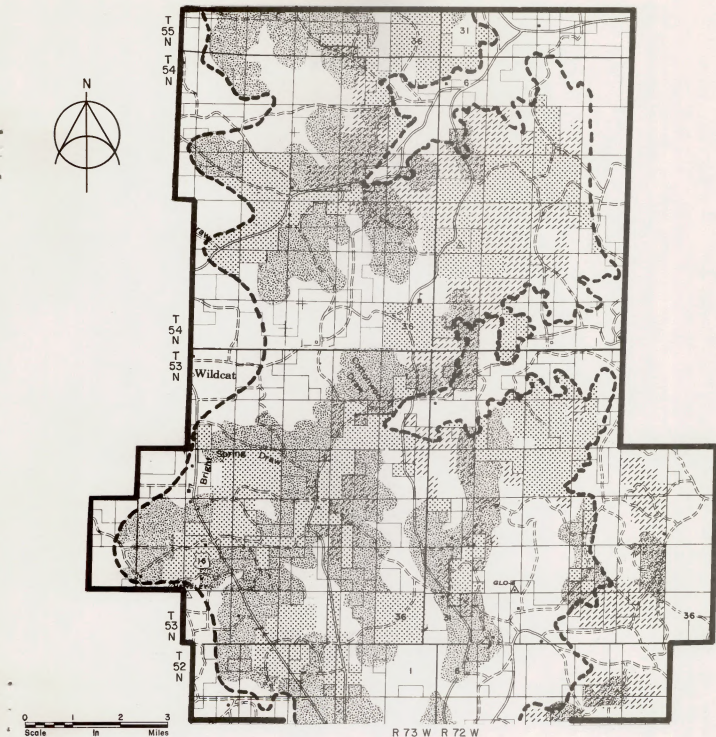
Within the Gillette review area, the following areas have been determined acceptable pending study:

	<u>ACRES</u>	<u>TONS</u>
Within area available for competitive leases or exchanges--high and moderate potential coal .....	84,438.0	18,588,700,000
Within PRLAs .....	9,105.0	1,033,500,000
TOTAL .....	93,543.0	19,622,200,000





Map 6a  
North Section Gillette Review Area  
Unsuitability Criterion 19  
Alluvial Valley Floors



- Study Area Boundary
- - - High and Moderate Potential Coal Boundary
- Acceptable Pending Study

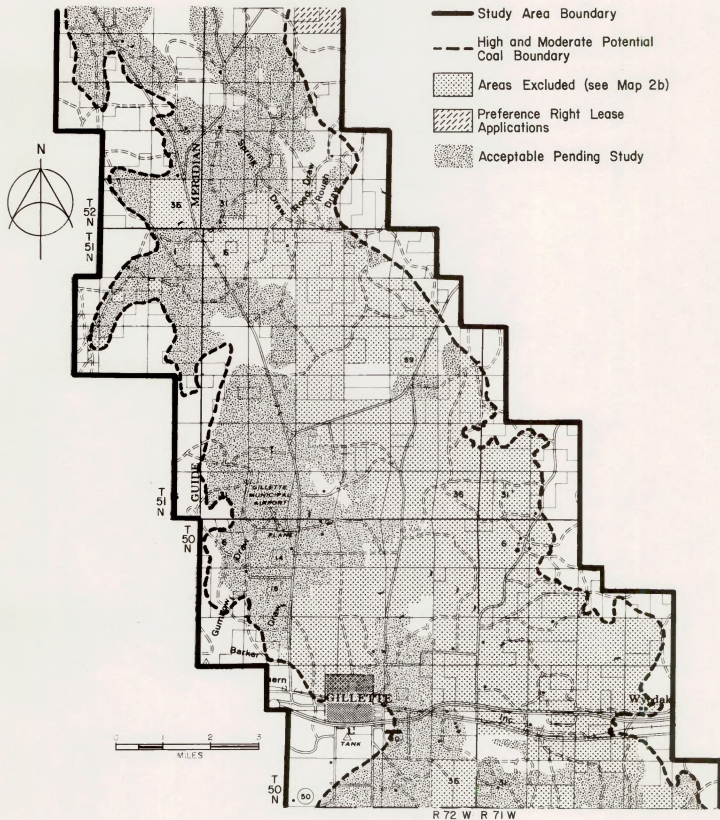
- Areas Excluded (see Map 2a)
- Preference Right Lease Applications

THE  
HISTORICAL  
GEOGRAPHY



Map 6b  
Central Section Gillette Review Area

Unsuitability Criterion 19  
Alluvial Valley Floors



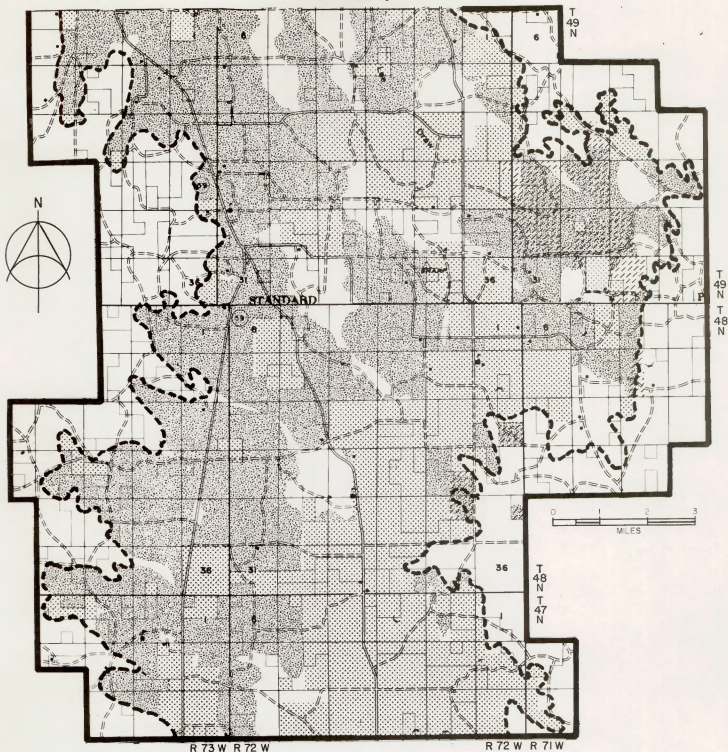
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Map 6c  
South Section Gillette Review Area  
Unsuitability Criterion 19  
Alluvial Valley Floors



— Study Area Boundary

Areas Excluded (see Map 2c)

--- High and Moderate Potential Coal Boundary

Preference Right Lease Applications

Acceptable Pending Study



#### CRITERION #20--STATE-PROPOSED CRITERIA

Federal lands in a state to which is applicable a criterion (i) proposed by that state, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

Exceptions. A lease may be issued when:

(i) Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis, plan, or supplement to a comprehensive land use plan, for the area in which such land is included, or

(ii) After consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not adversely affect the value which the criterion would project.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Data Source

None.

Unsuitability Assessment

The state has not proposed nor has the Secretary adopted any unsuitability criteria; therefore this criterion cannot be applied.

No areas were determined unsuitable for coal mining on the basis of this criterion.

THE UNIVERSITY OF CHICAGO  
DIVISION OF THE PHYSICAL SCIENCES  
DEPARTMENT OF CHEMISTRY  
5301 SOUTH DICKENS STREET  
CHICAGO, ILLINOIS 60637

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN CHEMICAL SOCIETY  
FROM THE DEPARTMENT OF CHEMISTRY, UNIVERSITY OF CHICAGO  
RE: [Illegible Title]

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# COMMENTS

HERE ARE MY COMMENTS CONCERNING THE EASTERN POWDER RIVER  
MANAGEMENT FRAMEWORK PLAN (MFP) AMENDMENT.

NAME \_\_\_\_\_  
ORGANIZATION \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
DATE \_\_\_\_\_



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